



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,208	09/24/2003	Pal Francis Hansen	3658-1001	1603
466	7590	11/01/2004	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			LAM, CATHY FONG FONG	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/668,208

Applicant(s)

HANSEN ET AL.

Examiner

Cathy Lam

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 19-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-24 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05-27-04, 09-24-04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### ***Election/Restrictions***

In the amendment filed on August 30, 2004, applicant added a new product claim 25. Since claim 25 is a product result from the method of making in claim 19 and its dependent claims, the examiner is grouping claims 19-25 together, as if they are all in group II. Since applicant elects group I (ie. claims 1-18), claims 19-25 are taken as they are non-elected claims and withdrawn from consideration for now.

### ***Drawings***

1. The drawings are objected to because reference number 27 in Fig. 1 is not described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Art Unit: 1775

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because they do not clearly show the present invention, e.g. Figure 1 is unclear and Figure 4 does not show the clearly show the claimed elements. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

1. Claims 4, 6, 13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, it is vague and indefinite as to what "sandwich core (4)" is referring to and comprised of? Clarification is required.

In claim 6, it is vague and indefinite as to what "another material" is referring to?

In claim 13, the phrase "the electric supply cables" lacks antecedent basis.

In claim 15, the phrase "the temperature sensor" lacks antecedent basis.

***Claim Objections***

2. Claims are objected to because of the following informalities: it is not necessary to include the numerals in the claims. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 7, 9-18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rutherford (US 6263158).

It is noted by the Examiner that some claims are drafted in a product by process format. It is the product itself which must be new and unobvious. Unless some unexpected result is shown that occurs due to Applicant's specific process(es), different processing steps are not patentably distinguishing for claims to an article.

Rutherford discloses a heating element comprised of a resistive wire (26), two fibrous layers (114) and two polymer layers (113) (Fig. 3).

The two fibrous layers (114) are placed over the resistive wire (26) and the two polymer layers (113) are formed onto the fibrous layers (114). Heat and pressure are applied to the heating element so that the polymeric resin (113) melts and encapsulates the fibrous layers and the resistance wire (26) (col 5 L 5-11).

The fibrous layers (114) can be glass fibrous layer (col 5 L 24-26). The polymer layer (113) can be thermoplastic resins (col 4 L 30-32). The resistance wire (26) has a serpentine pattern, and the wire endings are connected to a pair of terminal electrical conductors (14,16) (ie. terminals). A temperature control device (10) (ie. temperature sensor) is connected to the resistance wire (col 4 L 1-4). The heating element is formed by compression molding (col 6 L 50-63).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutherford (US 6263158).

Rutherford teaches the present invention but is silent about having a sandwich core and a mould plate formed from a thermally conductive material.

In view of the prior art teaching, it would have been obvious to include a core and an additional fiber reinforced thermoplastic layer because it adds more strength to the structure. Furthermore, it would also be obvious to choose a pair of thermally conductive plates during the press molding process because it allows heat transfer from the plates to the polymeric resin so that the resin would melt and flows around the fibrous mats.

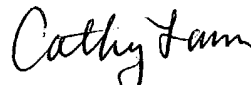
***Allowable Subject Matter***

7. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if incorporate into independent claim(s).
8. The following is a statement of reasons for the indication of allowable subject matter: there is no teaching in the prior art directed to a heating element that comprised of a plate which is from the mould, and the plate becomes part of the finished product.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Cathy Lam  
Primary Examiner  
Art Unit 1775

cfl  
October 27, 2004